



Qualitative Enhancement and Quantitative Growth: Changes and Trends of China's Higher Education

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This article identifies the international and domestic drivers of current changes in China's higher education. It then touches on the national agenda and policy concerning reforms in China's higher education since the 1990s. By arguing factors that are affecting and will affect changes, it is pointed out that two focuses can be seen in recent reforms in China's higher education: qualitative enhancement and quantitative expansion. Based on examining the qualitative improvement and massification of higher education in China, major trends and issues are discussed. *Higher Education Policy* (2005) 18, 117–130. doi:10.1057/palgrave.hep.8300076

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Introduction

The development of China's higher education since the later 1990s presents two striking characteristics: qualitative enhancement and quantitative growth. On the one hand, by implementing *Project 211* and *Project 985* and other national projects, the central government aims to build up a few selected internationally recognized universities that are and will be intensively supported by public funds, and also to enhance the quality of teaching and research activities by merging institutions and undertaking transnational education. On the other hand, the Chinese government is also making great efforts to stimulate massification of higher education, principally through increasing enrollment in the existing public sector, supplemented by encouragement of growth in the non-government sector and institutions in cooperation with foreign partners.

Much of the existing research on China's higher education focuses on certain aspects of the higher education system. Much literature deals with some important issues in China's higher education, for example, issues concerning private higher education, financial problems, or administrative reforms, but few reports provide an overall picture of what is currently going on and what changes will take place in China's higher education. This paper begins by



arguing the international and domestic drivers of change currently in China's higher education. It then touches on the national agenda and reforms of higher education since the 1990s. By exploring factors that are affecting and will affect changes in China's higher education, it is pointed out that two focuses can be identified in the recent reforms: qualitative enhancement and quantitative expansion. Based on examining the qualitative improvement and massification of higher education in China, major trends and issues are discussed.

Basic Statistics and Drivers of Change

Basic statistics

Current Chinese higher education institutions can be categorized into three major types: regular institutions, adult institutions, and private institutions (*Minban* or *Shehui Liliang Banxue* in Chinese, meaning institutions run by the non-government sector or by social forces). According to government statistics (<http://moe.edu.cn>, accessed on 23 August 2004), there were 1,683 regular institutions in 2004. These institutions generally consist of comprehensive universities, 4-year colleges, junior colleges (*Zhuangke Xuexiao* in Chinese), colleges of higher vocational education, and independent colleges. In addition, there were 528 adult institutions in 2004, comprising workers' colleges, peasants' colleges, colleges of administrative cadres, broadcasting & TV institutions, etc. All of the regular institutions are vertically administered and financed by one of the three types of administrative authorities: (1) the Ministry of Education (the MOE), which was renamed the SEC, State Education Commission in 1985, and again renamed MOE in 1998; (2) central-level ministries and agencies; (3) provinces and province-level municipalities. Except for two private adult institutions, the majority of adult institutions are run by local authorities with a few being administered by MOE and central-level ministries and agencies. There were 214 private institutions in 2004, but only four of them are qualified to confer bachelors' degrees, mostly being 2-year institutions of short-cycle programs and almost totally dependent on students' tuition and fees. According to government statistics, in 2003 the total enrollment in higher education amounted to nearly 17% of the cohort aged from 18 to 21 years (<http://www.edu.cn>, accessed on 30 August 2004), indicating China had achieved mass higher education according to Martin Trow's definition.

Drivers of change

Driving forces for changes in China's higher education over more recent years have been closely correlated with a combination of worldwide trends in



conjunction with the domestic socio-economic background. The rationale that has affected development of China's higher education, especially after the later 1990s, can be grouped into several major factors.

In recent years, the influences of globalization, internationalization, and China's participation in the WTO in 2000 have largely changed China's higher education. Since the 1990s, it has been widely recognized in China that higher education is not only required to be responsive to domestic economic growth and to train human resources for national development, but is also expected to take up challenges from world-wide influences and maintain development in response to a conception of competition with a global perspective. Deeply influenced by international factors, at least three big changes have taken place recently in China's higher education: more emphasis has been placed on quality, efficiency and accountability of higher education institutions, on corporatization or privatization of the public sector, and on enhancement of teaching and research activities, including the development of internationally recognized manpower and pursuit of a world-class research achievement.

From a domestic background, two particular driving forces can be identified as affecting reforms of China's higher education. First, what has changed China's higher education significantly in recent years is the introduction of market-oriented and competitive mechanisms. Up to the 1970s, the major function of higher education institutions was to train professional manpower specialized in engineering and science. Higher education was rigidly controlled and regulated by the central government, based on a planned economy system. After 1992, as China further initiated deeper economic reforms and facilitated the pace of transition to a market economy with Chinese characteristics, market mechanisms were rapidly introduced into the development of China's higher education. Since then, with changing patterns of management and governance and decentralization, more autonomy has been delegated to institutional level and individual institutions are expected to take more responsibilities and be more responsive to the market and to society. Second, the increasing numbers of high school graduates and a sustained level of unemployment have also exerted an impact on quantitative growth of higher education in the most recent years. One of the direct outcomes is the great expansion of higher education that was started in 1999.

National Agenda and Changes of Higher Education in China

National agenda and policy

Since reforms on higher education are basically regulated and influenced by the central government through a series of regulations and documentation, it is important and meaningful to review the changes of national policy. The first



important document that affected reforms in China's higher education was *Decision of the Central Committee of Chinese Communist Party on Reform of the Education System* issued in 1985 (*People's Daily*, 29 May 1985). In the *Decision*, many powers were delegated to the institutions: for example, they can now decide on the disposition of the capital and recurrent funding channeled from the government and tap into other appropriate sources for investment in addition to governmental grants. In 1993, the *Outline for Reform and Development of Education in China* was promulgated by the central government, which emphasized the necessity of building up approximately 100 key universities and a few key disciplines and specifications and making some universities reach a rather high level in the world in the quality of their education, research activities, and administration and management. In 1995, based on the *Outline*, more operational and specific principles concerning reforms in higher education were clarified in the *Education Act*. Under the *Higher Education Act* of 1998, what is mentioned in the *Outline* of 1993 is further stressed. For instance, non-government institutions are permitted and regarded as an important component in China's higher education system and institutions are encouraged to conduct contract research and joint projects with enterprises, business, social organizations, and other private sector agencies. In the document *Action Plan of Education Promotion for the 21st Century* (*Guangming Daily*, 25 February 1999), issued by the MOE in 1998, the policy and objectives of expanding higher education enrollment are stated in detail.

The importance of the *Education Act* of 1995 and the *Action Plan of Education Promotion for the 21st Century* of 1998 as well as the *Higher Education Act* of 1998 cannot be overstated. They indicate that the traditional model of higher education institutions almost totally controlled by government in a planned economic system, has to be changed and become one more oriented towards society. The *Action Plan* especially articulates the future of China's higher education and covers a wide range of pilot projects such as the *211 Project*, the *Project for Creative Talented People with High Level*, the *Plan for Creating the Most Excellent Universities and Disciplines in the World*, *Modern Long-Distance Education*, and the *Project for Industrializing the High Technology in the Universities*. Clearly, since the later 1990s, higher education has been put in a strategic position for the future of the nation. It is stressed that the government is only responsible for the development of higher education at a macro level, and will not interfere excessively in operational affairs in individual institutions as it used to. More powers are delegated to institutions: they are allowed to make decisions on teaching and research activities and to generate their own resources through various channels. In addition, universities are also required to place more emphasis on accountability and enhance the quality of their teaching and research activities. In sum, in most recent years, a new kind of national agenda for China's higher

education, which is basically controlled and adjusted by the central government at a macro level and principally regulated by market mechanisms, has been given a legislative form.

Qualitative enhancement

Various measures have been adopted to enhance the quality of education and research activities in China's higher education since the 1990s, especially the issue of *Project 211* and *Project 985* has significantly affected qualitative enhancement of China's higher education.

In November 1995, 2 years after the issue of the *Outline*, the former SEC implemented *Project 211* that was first mentioned in the *Outline* of 1993. Actually, it indicated the first step by the Chinese government to make an issue of the quality of higher education. The *Project 211* is often literally explained as the attempt by Central government to establish 100 key universities in China by the 21st century. However, in fact it covers more specific objectives. The major points concerning qualitative enhancement in the *Project* include three key decisions. First, to finance Peking University and Tsinghua University intensively with the purpose of enabling the two universities to reach or approach a higher level in the world and become world-class institutions. Second, to enhance the quality of 25 other leading universities through provision of additional public revenue. Third, to make efforts to improve the quality of over 300 key disciplines in different institutions. According to the statistics, it is estimated that during the period 1996–2002 alone, nearly 18.3 billion RMB was allocated from the central government on *Project 211*, including 6.3 billion for quality improvement in key areas of study in universities that were selected by the MOE and 1.0 billion for improving infrastructure and equipment in related universities (*China Education Daily*, 6 June 2001). By September 2004, 99 universities had been selected and given special financial support by both central government and local authorities (<http://www.vhjm.com/link/211.htm>, accessed on 25 October 2004). It is considered that the *Project 211* is the first national key project that has been funded intensively in higher education by the government since the establishment of the People's Republic of China in 1949.

From 1998, a second step to make further improvement to the quality of higher education has been taken. On 4 May 1998, when the former Chairman Jiang Zemin made a speech on the 100th anniversary of Peking University, he addressed the necessity to establish some first-rank and world-class universities in China. In December 1998, the MOE worked out objectives and principles in the *Action Plan*. The *Action Plan* emphasizes that within the next 10 or 20 years, some Chinese universities and key areas of study should reach a world-class level and be internationally recognized. Afterwards, *Project 985* — which



means that the idea of *Project* was first mentioned by the former Chairman Jiang Zemin in May 1998 — was immediately implemented.

Initially, only Peking University and Tsinghua University, the two top universities in China, were selected to be funded intensively by the central government. According to the *Action Plan*, in the following 3 years, the two universities would be allocated a special 1.8 billion RMB budget for their efforts to reach a higher level in the world in research and teaching activities. From July 1999, the MOE decided to add seven more universities and fund them jointly in cooperation with local authorities. Subsequently, more and more institutions have been encouraged and supported to enhance their quality in research and education with the aim of becoming world-class or world-famous universities. Since 2000, the number of universities that have been funded by the MOE, together with other Central ministries and local authorities has kept on growing. By 2003, they amounted to 34. It is likely that in the next few years the number of universities to be placed on the list of the *Project 985* might increase to 38.

One of the important measures that have been taken to enhance the quality of higher education institutions since 1992 is to undertake national-scale mergers. Over the past decade, the structure of the higher education system established in the 1950s, with much emphasis on institutions of science and engineering, has been essentially changed by mergers between highly professional colleges with a single area of study or specialization. In their place, several huge institutions have been established with an intent to become world-class universities. With other institutions, mostly famous higher professional institutions, being consolidated into these huge universities, they have become more research-oriented: many national key research units and experiment centers are to be found in these huge universities. Besides, in these newly merged institutions, students are provided with a variety of subjects covering almost all advanced areas of study. For example, the new Zhejiang University was formed from the former Zhejiang University and other three professional universities; a new Peking University was based on the merger of Peking University and Peking University of Medicine; and a new Tsinghua University was founded by absorbing the former Central Collage of Fine Arts. Through mergers, these huge and comprehensive universities were established, with excellent faculty members and researchers; they include almost all disciplines and most of the key research units and experimental centers.

In addition to the two big projects that pay particular attention to qualitative enhancement in research activities in a very few selected key universities, special efforts have also been made to improve the quality of education in all higher education institutions. One of the major measures that has been taken recently is implementation of assessment on quality of teaching activities at the level of undergraduate education. However, it is conducted neither through

peer reviews nor by a third party: the assessment is fundamentally organized and directed by the MOE.

As early as 1990, the first regulation concerning assessment on teaching quality was promulgated. In the *Act of Higher Education* of 1995, the importance of improving the quality of teaching activities in universities is once again emphasized. By 2002, three types of assessments on quality of undergraduate education had been conducted: a Qualified Assessment on undergraduate education in institutions that were established after 1976; an Excellence Assessment on key universities that were placed on the list of *Project 211*; and a Random Assessment on the remainder of institutions (<http://www.moe.edu.cn>, accessed on 6 June 2003). It is reported that from 1994 to 2003, these three types of assessments had been implemented in more than 200 higher education institutions, including Excellence Assessments on 16 institutions; Qualified Assessments on 192 institutions; and Random Assessments on 26 institutions. (<http://news.xinhuanet.com/>, accessed on 24 October 2004). In order to make a more effective and efficient effort to regulate assessment on university education at a national level, on 26 October 2004, Center for Assessment of Higher Education Teaching was established by the MOE. It is directly attached to and led by the MOE and specifically funded for conducting assessment on teaching activities and other professional education in higher education institutions on a national scale. From now on, quality assessment on teaching activities in every higher education institution will be conducted by the Center every 5 years. According to the outcome of assessment, all institutions will be ranked at four levels: excellent, good, pass, and failure. In addition, it is also compulsory for institutions to report their data concerning teaching activities to the MOE every year. By publishing the yearly data and implementing assessment every 5 years, the MOE expects to be able to survey the ongoing situation and quality of teaching activities in all universities (*China Education Daily*, 27 October 2004). Consequently, strongly supported by the central government, this national system of qualitative enhancement of research and teaching activities in higher education has been established in China in the most recent years.

To develop institutions and programs in cooperation with foreign partners or institutions in Hong Kong with authority to award foreign degrees, qualifications or degrees of HK universities in China is considered an effective way to improve the quality of teaching activities in Chinese higher education institutions. Since 1995, Chinese universities have undertaken cooperation in various forms to offer joint programs leading to foreign degrees with more than 10 foreign countries, notably developed Western countries, international organizations, and universities in Australia, Singapore, and Hong Kong. According to the statistics, by 2002, 712 joint programs had been provided for Chinese students in China; and joint programs that are qualified to award



foreign degrees amounted to 97 (Zhang, X. 2003); by 2003, the number of degree-conferring joint programs had increased to 137. (<http://www.moe.edu.cn>, accessed on 12 July 2004) The majority of the joint programs offered with foreign degrees are concerned with international management of trade, finance, and information science, that is, a focus on these newly developed and popular subjects similar to that found in some Western countries. By offering joint programs with foreign partners, on the one hand, China can train manpower equipped with advanced knowledge of international economics, management, information science, and law; on the other hand, ideas of teaching and foreign teaching materials from developed countries can also be introduced into Chinese universities.

Quantitative growth

To achieve mass higher education has been another recent big challenge for China's higher education. As indicated in Figure 1, especially from 1999 there has been a rapid increase in enrollment in higher education. In 2003, the gross enrollment of the age-cohort (18–22 years) reached 17%, indicating that China has entered the stage of mass higher education.

Compared with many developed nations, enrollment in China is still much lower, but what is worth mentioning is that the total number of students in Chinese higher education institutions has already reached approximately 19 million and China has become the country with the largest number of students in higher education institutions, even surpassing the number in the United States.

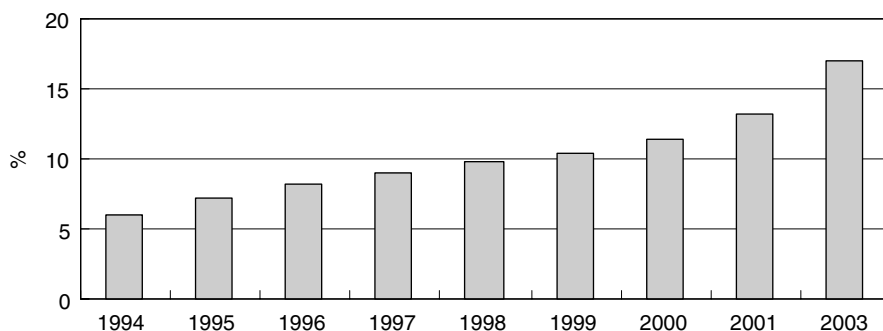


Figure 1. Gross enrollment in higher education in China. *Source:* Ji, B. 'Guanyu Gaodengyuan-xiao Maoruxuelv Wenti (On the issue of gross enrollment in higher education), *China Education Daily*, 16 January 1999. <http://www.edu.cn>, with author's modification, accessed on 30 August 2004.

The decision to expand enrollment in higher education was made by the State Council and announced by the former Primer Minister Zhu in June 1999. In the document *Action Plan* mentioned above, the policy and objectives of expanding higher education enrollment are clearly stated. According to the document, by 2000 Chinese higher education was to be greatly expanded and the overall enrollment in higher education was expected to reach 10% of the age-cohort. By 2010, it was to have increased to nearly 15%.

Four factors can be identified in facilitating the dramatic expansion of China's higher education since 1999. First, enrollment in China's higher education of the age-cohort (18–22 years) was too low prior to the later 1990s. It was not only lower than in most developed countries, but also lower than in many developing countries. Second, there has been an increasing demand for higher education. In particular, since the middle of the 1990s, the issue of increasing demand for higher education and the ability of the limited number of higher education institutions to meet it has become more and more serious as China's economy expands rapidly. Third, massification of higher education is considered as an effective way to solve the problem of a high level of youth unemployment and to facilitate investment on higher education. Finally, due to the low enrollment in higher education, admission of high school graduates to higher education institutions was extremely competitive (Li, L. 2003).

While numbers of students in all types of higher education institutions expanded greatly (Figure 2), the increase of enrollment in regular institutions was particularly striking, growing from 3.6 million in 1998 to 11.08 million in 2003 and constituting more than 50% of the total number of students.

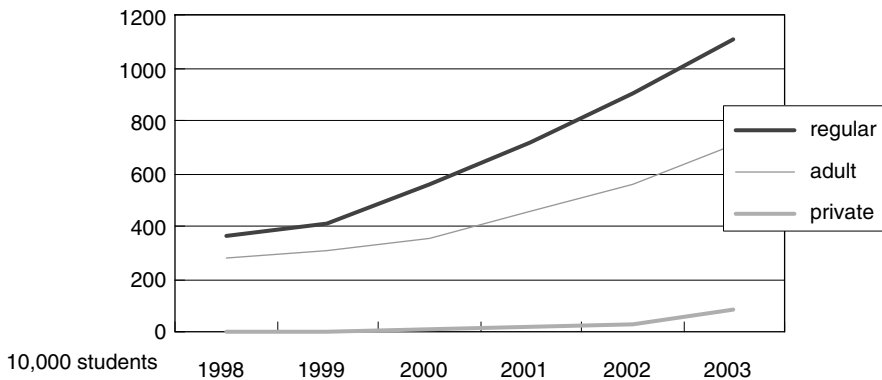


Figure 2. Number of students in regular, adult and private institutions in China. *Source:* Shanghai Institute of Education Science, *Zhongguo Minban Jiaoyu Lypishu* (Green Book of Private Education in China), Shanghai, Shanghai Education Press, 2003, *China Education Daily*, 27 May 2004.



However, among various types of regular institutions, almost no radical expansion of student numbers has occurred in the leading universities, and in particular in the key universities directly run and administered by MOE and central-level ministries or agencies. The increases in number of enrollments in regular institutions were mostly achieved in local universities and institutions with lower prestige. It is reported that by 2002 no big changes had occurred in enrollment at Peking University, Tsinghua University, Beijing Normal University, and other key universities (*Beijing Youth Daily*, 3 April 2002). Compared with other types of regular higher education institutions, significant increases can be seen particularly in the newly founded independent colleges, which used to be called second-level colleges (*Erji Xueyuan* in Chinese) within or attached to existing regular universities. By 2003, according to incomplete statistics, there were more than 300 independent colleges established in 25 provinces and municipalities; the number of their students at undergraduate level had reached more than 40,000 (Zhou, J. 2003). Currently, it is estimated that the number of students enrolled in independent institutions constitute one third of all undergraduate students and therefore they have made major contributions to the growth of student numbers in regular institutions (*Zhejiang Daily*, 28 April 2004). Besides, there has also been substantial growth in the number of students in short-cycle programs, mostly at two or three-year institutions without authority to confer bachelors' degrees. In this category, development of colleges of higher vocational education is especially noteworthy. By 2003, 909 colleges of higher vocational education existed; the majority of them are established within existing regular institutions: their proportion amounted to nearly 60% of all regular institutions (<http://www.tech.net.cn>, accessed on 3 September 2004).

It should be noted that the expansion of student numbers is attributable mainly to the rise in students in the public sector, including all the regular institutions and nearly all of the adult institutions, rather than to the private sector. In most recent years, although there has been a steadily growing number of both private students and private institutions — for example, the proportion of private students grew from 0.7% in 1998 to 4.3% in 2003, a rate of growth even faster than that of the regular institutions (Shanghai Institute of Education Science, 2003; *China Education Daily*, 27 May 2004) — private students and institutions respectively accounted for only 4.3% and 0.8% of the total in 2003.

By area of study, numbers of students in economics, law, literature, and education, underwent rather fast growth. This is particularly true in regular institutions in which numbers of students grew in the largest amounts. For example, at undergraduate level, the proportion of students in economics increased from 13.7% in 1998 to 18.6% in 2001, in contrast to a drop in the proportion of students of engineering from 42.9% in 1998 to 32.1% in 2001.

Similar changes took place also at the level of short-cycle programs: for example, the proportion of students in economics grew from 16.2% in 1998 to 23.0%, a rate of growth faster than in any other areas of study at the level. As for students enrolled in engineering, with small increases in 1999 and 2000, overall the number decreased from 30.7% in 1998 to 30.2% in 2001. Moreover, the proportion of students in science has also been decreasing from 12.3% in 1998 to 7.1% in 2001. (National Center for Education Development Research, 2002). Although there are slight differences in the changes of enrollments in adult and private institutions, in general during the quantitative growth in China's higher education, it has been through more students in humanities and social science rather than in engineering that the numbers have increased greatly.

Trends and Issues

Trends

According to the *Higher Education Act* of 1998 and other documentation issued by the central government in the most recent years, it might be assumed that in the near future the development of China's higher education might still focus on qualitative enhancement and quantitative expansion.

For qualitative enhancement, much emphasis will continue to be placed by the central government on a very few selected key universities as is currently being done. Due to the increasing constraints of finance, the numbers of these universities will not increase quickly to any large extent. Like most world-famous universities in other countries, the few selected huge universities are equipped with better infrastructure and better-regarded staff members than other Chinese universities. Enjoying a supportive policy and favorable funding, they not only represent a high academic level for Chinese universities in an international context, but also affect greatly the future reforms of other Chinese universities.

With regard to quantitative expansion of higher education, no significant evidence shows that there is likely to be a great increase in numbers of students in those most prestigious universities mentioned above; neither is there any high possibility for such a rapid growth in numbers of private students as occurred in Japan, South Korea, or the Philippines during the massification of their higher education. Although private education had already come into being in the 1980s, the existence of private institutions was not officially admitted till the implementation of the *Outline* of 1993. Even at present, private education is still rigidly controlled by the government.

Consequently, growth of student numbers in the public sector might still play an important role in the further expansion of China's higher education.



However, it does not necessarily mean that quantitative growth depends only on increases of students in the existing regular public universities, although they will still contribute much to the expansion of Chinese higher education. As it becomes more and more difficult for the central government to be fully responsible for financing a further expansion or of funding a transition from the current mass higher education to universal access to higher education, it is highly possible that new types of higher education institutions, which will probably differ both from the present traditional public regular universities and the current private institutions, will eventually come into being. Namely, some other types of newly established institutions might play an increasingly important role in the future expansion of China's higher education if there is to be a further extension of massification of higher education. To sum up, Chinese higher education will be expanded principally through increasing enrollment in the existing public sector, supplemented by encouraging growth of other sectors and types of higher education. Diversified ways of growth in numbers of students in a variety of institutions can be expected to take place.

Issues

Similarly to many other countries, China is currently also facing the serious issue of a growing constraint of public expenditure on higher education. Over the past decades, government revenue for higher education in real terms has increased, but the proportion of GNP for education has fallen annually. Moreover, government revenue per college student has not risen strikingly either (Research Group of China's Human Resources, 2003). As a result, since the later 1990s, the institutionally generated sources of funding and tuition and fees from students have accounted for an increasingly large portion of the total institutional revenues. There may possibly exist no financial problems for some key universities that are and will continue to be intensively funded by the central government and local authorities; however, the majority of institutions and in particular those local and less prestigious universities will have to generate a large part of their revenue by their own efforts. It will be very difficult for these institutions to raise their research and teaching activities to world levels while busily involved in generating new sources of income through various channels. Hence, the gap between the few key universities and most local institutions will become much wider.

It is true that the rapid expansion of higher education in China over the past 5 years has largely met increasing demand for higher education, but the tremendous increase of student numbers in such a short time has also given rise to plenty of problems (Zhou, Y. 2002). A shift of student financial support from the government to students and families (e.g. tuition and fees, private education) at a growing pace during the massification of higher education even

in the public sector combined with a lack of sufficient scholarships and insufficient loans for students have caused tuition and fees to become a big financial burden for many needy students from poor areas. Furthermore, the huge expansion of numbers of students has led to poor conditions, shortage of faculty members, and a lack of infrastructure and equipment across university campuses, and a decreasing quality of teaching activities in many local institutions, where numbers of students have increased in large quantity. For example, the ratio of faculty to students has increased from 1:11 in 1998 to 1:20 in 2003 in many universities; in some local universities it has even reached 1:30 or 1:40. Another big problem is the high rate of unemployment of university graduates because of the speedy expansion of student numbers over such a short time. It is reported that by June 2003, the rate of employment of university graduates had only reached 50%. In 2004, the rate rose to 74%, but still 0.75 million university graduates have not found jobs (Chen, X. 2004).

Conclusion

As discussed above, since the 1990s two focuses have been evident in the reforms of China's higher education: qualitative enhancement and quantitative expansion. However, the emphasis on quantitative expansion or qualitative enhancement varied according to changes of policy over the past years. By the later 1990s, it seems that much greater emphasis had been placed on qualitative enhancement than quantitative growth: for many decisions concerning qualitative enhancement had been promulgated. Although some evidence shows that the expansion of higher education was initiated in the early 1990s, a big expansion did not occur until 1999. It is only from the later 1990s that both qualitative enhancement and quantitative growth have been equally stressed and facilitated in a national agenda of the central government.

Currently, the central government still plays a significant part in regulating and motivating both qualitative improvement and quantitative growth. Besides, private institutions in China do not seem to have contributed significantly to the massification of higher education. Nor is it likely that they will play a dominant role in the future expansion of higher education, unlike many countries in East Asia. This shows that the recent development of China's higher education is still far more regulated by government policy than oriented by market mechanisms. However, it should be stressed that, with decentralization and regionalization to local authorities, more efforts have also been made by regional governments since the later 1990s. In the future, it may be that local authorities will contribute far more to the expansion as higher education becomes more oriented to market mechanisms and responds to the needs from local communities in China.



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